ABSTRACT OF THE DISCLOSURE

The present invention provides a liposomal composition for treating dislipidemias in human subjects, a method of using a liposomal composition, and devices and modes of operation of the devices and of the compositions, and kits related thereto. The invention provides for the reverse transport of cholesterol from peripheral tissues to the liver in a warm blood mammal while controlling plasma atherogenic lipoprotein concentrations, including LDL concentrations. A method described above and mode of operation of the devices includes the stop of administering an effective amount of a multiplicity of acceptors comprised of phospholipids substantially free of sterol. A method described above optionally includes the stop of periodically assaying atherogenic lipoprotein concentrations with an assay during the treatment period to assess atherogenic lipoprotein concentrations and obtain an atherogenic lipoprotein profile.

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The present invention provides a liposomal composition for treating dislipidemias in human subjects, a method of using a liposomal composition, and devices and modes of operation of the devices and of the compositions, and kits related thereto. The invention provides for the reverse transport of cholesterol from peripheral tissues to the liver in a warm blood mammal while controlling plasma atherogenic lipoprotein concentrations, including LDL concentrations. A method described above and mode of operation of the devices includes the step of administering an effective amount of a multiplicity of acceptors comprised of phospholipids substantially free of sterol. A method described above optionally includes the step of periodically assaying atherogenic lipoprotein concentrations with an assay during the treatment period to assess atherogenic lipoprotein concentrations and obtain an atherogenic lipoprotein profile, and adjusting the administration in response to the profile. The large liposomes are dimensioned larger than fenestrations of an endothelial layer lining hepatic sinusoids in the liver so that the liposomes are too large to readily penetrate the fenestrations of one variant. The therapeutically effective amounts are in the range of about 10 mg to about 1600 mg phospholipid per kg body weight per dose. A pharmaceutical composition and related kit for mobilizing peripheral cholesterol and sphingomyelin that enters the liver of a subject consisting essentially of liposomes of a size and shape larger than fenestrations of an endothelial layer lining hepatic sinusoids in the liver is also provided. The invention also provides for control of cholesterol related genes and other compounds. The present invention also provides compositions and methods for treating atherosclerosis. In one embodiment, the compositions comprise unilamellar liposomes having an average diameter of 100-150 nanometers. Methods for treating atherosclerosis employing the compositions of the present invention are also provided.